RESPONSE TO COMMENTS
City of Blackfoot, Idaho
NPDES Permit No.: ID-002004-4

On July 19, 2000, the comment period for the draft permit for the City of Blackfoot Wastewater Treatment Plant opened. The public comment period closed on August 18, 2000. Only the city submitted comments. This document summarizes the comments and addresses them.

1. Comment: Page 4, Item I.A.3., Fecal Coliform and *E. coli* Bacteria. The monitoring and limits in the permit are excessive. Fecal coliform monitoring and limits should be removed and the sampling frequency for *E. coli* should be clarified. Because the City has only one laboratory technician, it would simplify sampling efforts to "2 separate days every 7 days."

   Response: Idaho regulations at IDAPA 16.01.02.420.05, "Disinfection Requirements for Sewage Wastewater Treatment Plant Effluent" state that fecal coliform concentrations must not exceed a geometric mean of 200/100 ml and that the geometric mean computations must be calculated and recorded weekly. The fecal coliform limit has not been removed from the permit. Idaho regulations at IDAPA 16.01.02.251.01. for primary contact recreation specify that monthly average be determined based on a minimum of five samples collected every three to five days. As a result, the maximum time between sample collection can only be five, rather than seven days. The permit has been revised to require sampling for two separate days every five days.

2. Comment: Page 4, Item I.A.3., Total Chlorine Residual Limit. The proposed permit limits of 0.119 mg/L (average monthly) and a daily maximum of 0.173 mg/L is not achievable without significant capital outlay. As part of the treatment plant upgrade, the City is currently designing a new ultraviolet (UV) disinfection system. Once this system is online, there will no longer be a need for either chlorine or dechlorination. The City requests a compliance schedule of approximately 18 months (until April 2002) to install and commission the system. During this compliance schedule, the City requests that the total residual chlorine limit of 0.5 mg/L be retained.

   Response: EPA agrees that a compliance schedule is appropriate. Upon certification by the Idaho Department of Environmental Quality, the final permit will contain a compliance schedule of 18 months. Until the new UV system is operational, the total residual chlorine limit will remain as 0.5 mg/L. After the system is operational, the total residual chlorine limit and monitoring will be removed from the permit.

3. Comment: Page 4, Item I.A.3., Total Ammonia Limit. The proposed permit limits of 3.84 mg/L average monthly and 10.7 mg/L daily maximum are not achievable since the wastewater treatment plant is not designed to nitrify under current loadings. The ammonia limits should be removed, at least until the plant upgrade is completed.

   Response: EPA has analyzed the need for ammonia limits based on the new critical flows. No ammonia limits are needed at current conditions. Ammonia limits are needed, as discussed below, for the upgraded plant.

4. Comment: Page 6, Item I.A.6., Total Ammonia Limit, Upgraded Plant. The fact sheet uses flow information based on data from 1919 through 1999. Critical low flows calculated from this data are extremely low for actual conditions. The Palisades Dam was constructed on the Snake River above Blackfoot from 1955 to 1957 and the reservoir began filling in 1957. The critical low flows should be recalculated using data after the filling of the reservoir, and limits for total chlorine residual and ammonia should be revised.

   Response: EPA agrees, and the permit has been revised accordingly. All permit limits and parameters in the draft permit have been re-evaluated using a 7Q10 of 1488 cfs, and a 1Q10 of 1239 cfs. Based on this analysis, the discharge has reasonable potential to cause or contribute to an exceedance of only the ammonia criteria. As a result, draft water quality-based permit limits for total residual chlorine have been removed from the permit. As explained earlier, a technology-based limit of 0.5 mg/L for total residual chlorine will remain in the permit until operation of the UV disinfection system.

5. Comment: Page 6, Item I.A.6., Total Ammonia Limit, Upgraded Plant, Seasonal Limits. The upgraded plant will include a new aeration basin to provide increased nitrifying capacity. The upgraded plant is expected to have the capacity to nitrify flow with up to 12,000 lb/d of BOD in the summer, but only 8,800 lb/d in the winter. The plant does not have sufficient space to add a fourth aeration basin which would be required to reliably nitrify 11,900 lb/d of BOD in the winter. Ammonia limits for the upgrade should only be applicable in the summer or when water temperature exceeds 20EC. To require otherwise without additional funding for capital improvements would fall under the category of an un-funded mandate by EPA, which is prohibited by law. In addition, the cities of Star,

Middleton, and Meridian have recently been issued permits with no ammonia limits.

Response: Based on the new critical low flows, EPA further re-evaluated the need for ammonia limits on a seasonal basis, both pre-and post-plant upgrade. The following table summarizes the seasonal information. Based on this analysis, no ammonia limits are needed at current design flows. When the plant upgrade is complete, the limits in Table 1 below will apply. The permit has been revised to include these limits and a compliance schedule to allow the completion of the upgrade.

Table 1. Seasonal Information for Blackfoot Discharge

Parameter	**April 1 - September 30 (summer)**	**October 1 - March 31 (winter)**
1Q10, cfs	1782	1239
7Q10, cfs	2007	1488
acute NH_3 criterion, ug/L	1,325	1,960
chronic NH_3 criterion, ug/L	220	455
ambient pH, S.U.	8.7	8.5
ambient temperature, EC	20.3	14.2
ambient NH_3 concentration, ug/L	27	20
effluent NH_3 concentration, ug/L	4,016	6,880
NH_3 limits need at 3 mgd	None	None
NH_3 limits needed at 5.1 mgd, average monthly, mg/L	8.25	13.8
NH_3 limits needed at 5.1 mgd, daily maximum, mg/L	23.1	38.7

NOTE: Temperature, pH, and concentration inputs based on 95th percentile of data.

6. Comment: Page 6, Item B.2., Effluent Monitoring Requirements. The draft permit requires significant additional monitoring when compared to the existing permit. This additional monitoring would likely require the addition of laboratory staff. The monitoring requirements for lead should be revised to twice per year for lead, and once per month for total ammonia, nitrate-

nitrite, total Kjeldahl nitrogen (TKN), orthophosphorous, and total phosphorus.

Response: EPA has re-evaluated the available data and agrees with the City that the monitoring frequency can be reduced. The permit has been revised to require semi-annual monitoring for lead and monthly monitoring for total ammonia, nitrate-nitrite, total Kjeldahl nitrogen (TKN), orthophosphorous, and total phosphorus.

7. Comment: Page 7, Item I.B.3., Whole Effluent Toxicity (WET) Testing. The fact sheet stated that only four WET test reports were available and thus was not sufficient to make a reasonable potential determination. However, the City has actually conducted 12 tests, which show no toxicity in the dilution ranges considered for the existing or upgraded plant. Also, the fact sheet stated that WET testing requirements had been deleted from the permit, based on favorable data from previous tests. The WET testing requirements should be removed from the permit, or at least reduced to once a year. The new low flow values should also be used to determine dilution values.

Response: EPA has reviewed the additional data. Based on that review, and the new low flow values, the WET testing frequency has been reduced. The permit has been revised to require quarterly testing in the fourth year of the permit. The regulations at 40 CFR § 122.21(j) require all publicly owned treatment works (POTWs) with design influent flows greater than 1 mgd and POTWs with approved pretreatment programs to submit valid WET tests with their applications for reissuance.

8. Comment: Page 15, Item I.C.5.f., Heat. The heat limit is stated as 104 degrees. The limit should be revised to include the temperature scale.

Response: For clarification, this requirement is not an effluent limit. The permit has been revised to include the Fahrenheit (F) scale.

9. Comment: Page 17, Item I.C.8.B., Cyanide Monitoring. The grab sampling schedule should be revised to allow sampling during normal working times, rather than every three hours in a 24-hour period as specified in the draft permit.

Response: Based upon an additional analysis of the cyanide data submitted by the City of Blackfoot, EPA found that cyanide has consistently been non-detect at 0.005 mg/l for influent and something detectable up to about

0.060 mg/l in the effluent. In addition, although for sludge there is no limit for cyanide, Blackfoot's levels are significantly below the median levels. For those reasons, the permit has been revised to allow cyanide sampling during normal working hours.

10. Comment: Page 20, Item I.D., Receiving Water Monitoring. The City requests that the testing frequencies be reduced to quarterly sampling for all constituents.

Response: Quarterly monitoring for the life of the permit would provide at least 20 samples of each constituent. EPA believes that this would provide an adequate data set on which to base future permitting actions. The permit has been revised to require quarterly ambient monitoring.

CWA Section 401 Certification
by the State of Idaho,
Department of Environmental Quality (DEQ)

In a letter dated October 19, 2000, from Mark Dietrich, Regional Administrator, DEQ-Pocatello, to Gary L. Chaffin, Public Works Director, City of Blackfoot, DEQ concurred with the compliance schedules and mixing zone calculated using 25 percent of river volume, as detailed in the final permit. The State certified that the final permit for the City of Blackfoot Wastewater Treatment Plant will comply with the Clean Water Act and will not violate Idaho's Water Quality Standards and Wastewater Treatment Requirements.